

PENDING CLAIMS:

The currently pending claims, as originally filed, are provided as follows:

- 1 1. (Currently Amended) A method of constructing a lookup table of modes for encoding
2 data for transmission in a wireless communication channel from a transmit unit to a receive
3 unit, said method comprising:
 - 4 a) selecting at least one short-term quality parameter ~~of said data~~ associated with
5 the communication channel as received by said receive unit;
 - 6 b) determining a first-order statistical parameter of said at least one quality
7 parameter;
 - 8 c) determining a second-order statistical parameter of said at least one quality
9 parameter; and
 - 10 d) arranging said modes in said lookup table based on said first-order statistical
11 parameter and based on said second-order statistical parameter.
- 1 2. The method of claim 1, wherein said first-order statistical parameter and said second-
2 order statistical parameter are determined from a simulation of said wireless communication
3 channel.
- 1 3. The method of claim 1, wherein said first-order statistical parameter and said second-
2 order statistical parameter are determined from a field measurement of said wireless
3 communication channel.
- 1 4. The method of claim 1 further comprising:
 - 2 a) selecting a communication parameter;
 - 3 b) setting a target value of said communication parameter; and
 - 4 c) arranging said modes in said lookup table based on said target value.
- 1 5. *Please cancel claim 5 without prejudice.*

- 1 6. The method of claim 4, wherein said communication parameter is a statistical
2 communication parameter.
- 1 7. The method of claim 4, further comprising:
2 a) measuring a measured value of said communication parameter in said wireless
3 communication channel;
4 b) assigning an adjustment to at least one of said first-order statistical parameter and said
5 second-order statistical parameter based on a difference between said measured value and
6 said target value.
- 1 8. *Please cancel claim 8 without prejudice.*
- 1 9. (Currently Amended) The method of claim 8, wherein said second-order statistical
2 parameter comprises a variance of said short-term quality parameter.
- 1 10. The method of claim 9, wherein said variance is selected from the group consisting of
2 temporal variance and frequency variance.
- 1 11. The method of claim 8, wherein said short-term quality parameter is selected from the
2 group consisting of signal-to-interference and noise ratio, signal-to-noise ratio and power
3 level.
- 1 12. The method of claim 1, wherein said first-order statistical parameter comprises a mean
2 of said at least one quality parameter.
- 1 13. The method of claim 1, wherein said second-order statistical parameter comprises a
2 variance of said at least one quality parameter.

1 14. The method of claim 13, wherein said data is transmitted at more than one frequency
2 and said variance is a frequency variance.

1 15. The method of claim 13, wherein said data is transmitted in a multi-carrier scheme and
2 said variance is a frequency variance.

1 16. The method of claim 13, wherein said variance is a temporal variance.

1 17. Previously cancelled.

1 18. (Currently Amended) A storage medium tangibly embodying a lookup table of modes
2 for encoding data for transmission in a wireless communication channel from a transmit unit
3 to a receive unit, said storage medium comprising instructions for:

4 a) selecting at least one short term quality parameter ~~of said data~~ associated with
5 the communication channel as received by said receive unit;

6 b) determining a first-order statistical parameter of said at least one quality
7 parameter;

8 c) determining a second-order statistical parameter of said at least one quality
9 parameter; and

10 d) arranging said modes in said lookup table based on said first-order statistical
11 parameter and based on said second-order statistical parameter.

1 19. The storage medium of claim 18, further comprising instructions for:

2 a) selecting a communication parameter;

3 b) setting a target value of said communication parameter; and

4 c) arranging said modes in said lookup table based on said target value.

1 20. (Previously Amended) The storage medium of claim 19, further comprising instructions
2 for:

a) measuring a measured value of said communication parameter in said wireless communication channel; and

b) assigning an adjustment to at least one of said first-order statistical parameter and said second-order statistical parameter based on a difference between said measured value and said target value.

21. (New) A storage medium according to claim 18, wherein the second-order statistical parameter is a variance of the quality parameter.

22. (New) A storage medium according to claim 21, wherein the communication channel is a multi-carrier communication channel, and the second-order statistical parameter is a frequency variance of the quality parameter.

23. (New) A receiver comprising:
a quality parameter statistics computation block to select at least one short-term quality parameter associated with the communication channel as received by said receive unit, to determine a first-order statistical parameter of said at least one quality parameter, and to determine a second-order statistical parameter of said at least one quality parameter; and
a mode selection block, responsive to the quality parameter statistics computation block, to arrange said modes in said lookup table based on said first-order statistical parameter and based on said second-order statistical parameter.

24. (New) A receiver according to claim 23, wherein the receiver resides in a client device communicatively coupled to a wireless communications network through a multi-carrier communication channel.

25. (New) A receiver according to claim 24, wherein the second-order statistical parameter is a frequency variance of the multi-carrier wireless communication channel.

1 26. (New) A receiver according to claim 24, wherein the mode selection block selects a
2 communication parameter, generates a target value of said communication parameter, and
3 arranges the modes in said lookup table based on said target value.

1 27. (New) A receiver according to claim 26, wherein the mode selection block measures a
2 value of said communication parameter in said wireless communication channel, and develops
3 an adjustment to at least one of said first-order statistical parameter and said second-order
4 statistical parameter based on a difference between said measured value and said target value.

1 28. (New) A system comprising:

2 one or more substantially omnidirectional antennae(e), through which a wireless
3 communication channel with a remote device is selectively established;

4 a quality parameter statistics computation block, responsive to the communication
5 channel received via the antenna(e), to select at least one short-term quality parameter associated
6 with the communication channel as received by said receive unit, to determine a first-order
7 statistical parameter of said at least one quality parameter, and to determine a second-order
8 statistical parameter of said at least one quality parameter; and

9 a mode selection block, responsive to the quality parameter statistics computation block,
10 to arrange said modes in said lookup table based on said first-order statistical parameter and
11 based on said second-order statistical parameter.